

REMARKS

I. Status Of The Claims

Claims 1-11, 13, 15-22, 25, 29, and 34-44 were originally pending in the present application. Claims 1-11, 13, 15-22, 25, 29, and 34-44 stand rejected. Applicants have amended claims 16, 20, 25, 38, and 42-44 and claims 12, 14, 23, 24, and 26-33 have been canceled without prejudice or disclaimer. Claims 1-11, 13, 15 - 22, 25, 29, and 34-44 are currently pending in the present application. No new matter has been added.

II. Claim Objections

The Office Action has objected to claims 38, 42, and 44 for informalities. Applicants have amended claims 38, 42, and 44 as suggested by the Examiner to clarify the informalities. Thus, Applicants request that the objections to claims 38, 42, and 44 be withdrawn.

III. Claim Rejections Under 35 U.S.C. § 112

The Office Action has rejected claim 44 under 35 U.S.C. § 112, first paragraph, for failure to comply with the written description requirement. Specifically, the claim is alleged to claim subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Applicants have amended claim 44 clarifying the range to be up to 40 degrees.

The Office Action has rejected claim 43 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended claim 43 to clarify the range of motion. Therefore, Applicants request withdrawal of the 35 U.S.C. § 112 rejections.

IV. Claim Rejections Under 35 U.S.C. § 103

Claims 1, 4-6, 8, 10, 11, 13, 15, 16, 17-19, 20-22, 25, and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tatar* (U.S. Pat. No. 5,910,142) in view of *Ferree* (U.S. Pat. No. 6,802,844). Claims 2 and 3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tatar* and *Ferree* in further view of *Doubler et al.* (U.S. Pub. No. 2005/0070899). Claims 34-36,

40, 41, and 43-44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tatar* and *Ferree*. Claims 7 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tatar* and *Ferree* and in further view of *Sgier et al.* (U.S. Pub. No. 2005/0171538). Claim 37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tatar* and *Ferree* and in further view of *Sgier*. Claims 29 is rejected under 35 U.S.C. § 103(a) as being as being unpatentable over *Tatar* and *Sgier* and *Griss* (U.S. Pat. No. 5,910,142). Applicants respectfully traverse the rejection.

In making the rejections, the Office Action at page 7 states:

“It would have been an obvious matter of design choice to one skilled in the art at the time the invention was made to construct the bulbous ends of the rods with such an angle, since applicant has not disclosed that such solve any stated problem or is anything more than one of numerous shapes or configurations a person of ordinary skill in the art would find obvious for the purpose of having additional movement or to better orient the device during spinal surgery. *In Re Dailey and Eilers*, 149 USPQ 47 (1966).”

Ferree discloses a spinal alignment apparatus with rods 80 having ball-shaped ends which may be spherical, or semi-spherical. Link members 80 have male or female half spheres allowing either caps 84 or additional rods 80 to be attached (see Fig. 3G). The spheres are split with the split face being non-normal to the rod 80 axis (see Figs. 3G and 3H). End 82 has a male post 83 which is received by end cap 84, having female aperture 85. The split face is normal to a longitudinal axis of the male post 83. As shown in Fig. 3H, with the male post 83 received by the female aperture 85, the rods 80 may be turned at the joint region prior to installation, which permits the shafts of the rods to extend from the connector at various angles prior to tightening. Because of the non-normal split face of the ball shaped end, various rod shaft orientations are only achieved by rotation of the rod 80 about the longitudinal axis of the male post 83. In addition, rotation of the rod 80 about a longitudinal rod axis is not possible.

In contrast, Applicants' claimed invention accomplishes rod shaft orientation at a pedical screw channel by means of an entirely different type of joint. Claims 1, 9, 17, and 25 each include the recitation that “a second end of a rod is provided with a conical surface facing an outboard side of the second end” and Claim 20 includes the recitation of “a first rod second end provided with a first partial hemispherical ball member, the first partial hemispherical ball

member having a convex surface facing an inboard side of the first rod second end, and a centrally located protrusion having a spherical portion facing an outboard side of the first rod second end and a second rod second end provided with a second partial hemispherical ball member, the second partial hemispherical ball member having a convex surface facing an inboard side of the second rod second end, and a centrally located recess facing an outboard side of the second rod second end, wherein when the spherical portion of the centrally located protrusion has at least partially entered the recess, a joint is established in which a range of motion between the first rod and second rod is achieved without rotation of either rod about a longitudinal axis of the protrusion.” Articulation of the first and second rods from collinear is accomplished when the spherical portion of the protrusion has at least partially entered the recess and the range of articulation, or angulation, is governed by the conical surfaces of the partial hemispherical ball members.

Discussion

The Office Action asserts that, since applicants have not disclosed that the conical surface as claimed by Applicant solves any stated problem, the conical surface is nothing more than one of numerous shapes or configurations a person of ordinary skill in the art would find obvious for the purpose of having additional movement. Applicants respectfully disagree. Applicants remind Examiner that they are not required to disclose that the conical surface, as claimed, solves any particular problem. As noted by the following:

“The Board concluded, however, that placement of the SCR catalyst in the bag retainer was a matter of ‘design choice’ and that Chu's evidence and arguments to the contrary were unpersuasive because Chu's ‘specification is virtually silent on the matter of any purported advantage to locating the catalyst within the bag retainer’ and ‘does not state that the claimed location of the catalyst ‘inside the bag retainer’ solves any particular problem or produces any unexpected result.’...To require Chu to include evidence and arguments in the specification regarding whether placement of the SCR catalyst in the bag retainer was a matter of ‘design choice’ would be to require patent applicants to divine the rejections the PTO will proffer when patent applications are filed... We have found no cases supporting the position that a patent applicant's evidence and/or arguments traversing a § 103 rejection must be contained within the specification. There is no logical support for such a proposition as well, given that obviousness is determined by the totality of the record including, in some instances most significantly, the evidence and arguments proffered during the give-and-take of

ex parte patent prosecution.” *In re Chu*, 36 USPQ 2d 1089, 1094-1095 (Fed. Cir. 1995).

The Examiner cites *In re Dailey and Eilers*, 149 USPQ 47 (CCPA 1966), in making the argument that Applicants’ claimed joint is a matter of design choice. *In re Dailey and Eilers* addressed a situation in which the prior art disclosed certain claimed limitations, and Applicant unsuccessfully argued that it would not have been an obvious matter of design choice to combine these features or to modify a prior art reference to include known features. *Id.* at 49.

Briefly, *In re Dailey and Eilers* is directed towards a nursing container wherein a flexible bottom section collapses into a top section during use. *Id.* at 47. Both the top and bottom sections have a generally spherical configuration and are somewhat less than hemispherical in extent. *Id.* In rejecting the *Dailey et al.* application, the Examiner relied in part on *Matzen* (U.S. Patent No. 554,071). *Id.* at 48. *Matzen* discloses a two part nursing bottle with both parts of the nursing bottle being bulbous (referring to Fig 2 of *Matzen*) in shape and one part collapsing into the other part during use. The Court of Customs and Patent Appeals agreed with the Examiner and the Board, that there was insufficient distinction between the spherical bottom portion of *Dailey et al.* and the bulbous bottom portion of *Matzen* to be considered “anything more than one of the numerous configurations a person of ordinary skill in the art would find obvious for the purpose of providing mating surfaces in the collapsed container of *Matzen*.”

In the present case, the prior art fails to disclose several distinguishing limitations recited in claims 1, 9, 17, 20, and 25. *In re Dailey and Eilers* likewise is therefore inapposite. Applicants claim a joint having two degrees of freedom, i.e. each rod is able to rotate about its rod axis (the first degree of freedom) and angulation of the rods from collinear is achieved by a “hinge like” movement (the second degree of freedom) of the rods when the spherical protrusion has partially entered the recess. The joint of *Ferree* is a joint having a single degree of freedom, i.e. with the male post in the female aperture, there is only a rotation about the longitudinal axis of the male post. Furthermore, with the *Ferree* joint, the angle between the rod axis and the longitudinal axis of the male post will always remain constant. Thus, there is no indication that the *Ferree* joint achieves the disparate purposes that may be associated with the various limitations recited in claims 1, 9, 17, 20, and 25 since the claimed structure and the function it performs are different from the Applicants’ claimed joint. In such cases, a finding of

obviousness based on design choice is precluded. *In re Chu*, 36 USPQ 2d 1089, 1095 (Fed. Cir. 1995).

Applicants respectfully submit that the claimed conical surface involves novel and nonobvious relationships not previously appreciated in the prior art. Thus, this feature is not a mere design choice. Furthermore, the Office Action's dismissal of the Applicants' joint as "an obvious matter of choice" cannot be convincing absent some reason why a person skilled in the art would find it obvious to depart from the single degree of freedom joint of *Ferree* and adopt the two-degree of freedom joint as claimed. Absent such a reason, as in this case, the Office Action is relying on the forbidden use of hindsight as the basis for the modification.

For at least these reasons, claims 1, 9, 17, 20 and 25 are allowable over *Tatar* in view of *Ferree*, or in combination with any of the other prior art of record. Additionally, dependent claims 2-8, 10, 11, 13, 15, 16, 18, 19, 21, 22, and 34-44 are patentable based on their own merits, as well as the reasons their respective independent claims are allowable. Therefore, it is respectfully requested that the section 103 rejection be withdrawn.

Conclusion

Applicants respectfully request favorable action in connection with this application.

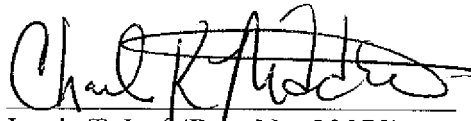
The Examiner is invited and urged to contact the undersigned to discuss any matter concerning this application.

No fee is believed to be due for this submission. Should a fee be required, the Commissioner is authorized to charge any such fee to Womble Carlyle's Deposit Account No. 09-5028.

Respectfully Submitted,

Date:

November 10 2008



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